

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

FACT SHEET

(pursuant to NAC 445A.236)

Permittee: Rockview Farms, Inc.
7011 Stewart & Gray Road
Downey, CA 90241-4347

Location: Ponderosa Dairy
G Ranch & Mecca Road
11 miles south of the junction of US Highway 95 and State Highway 373
Amargosa Valley, Nye County, Nevada 89020

Township 17 S, Range 49 E, Portions of Sections 9, 10 & 15 MDB&M

Dairy 1 - Latitude: 36° 29' 51" N; Longitude: 116° 27' 20" W

Dairy 2 - Latitude: 36° 29' 42" N; Longitude: 116° 26' 01" W

Dairy 3 - Latitude: 36° 29' 39" N; Longitude: 116° 27' 41" W

Permit: NV0023027 – Major Modification

Flow: 0.625 million gallons per day (MGD) – 30-day average

General: Ponderosa Dairy consists of two adjacent dairy facilities, owned and operated by the Permittee. The dairies are operated as Dairy 1 and Dairy 2 and are approximately the same size in terms cows housed, land and corral areas. Dairy 3, west of Dairy 1, has been proposed as a major modification of the existing facilities and will increase the number of Ponderosa cows and calves by approximately 68%.

Wastewater generated includes liquid manure, cow wash water, barn wash water, and water from washing the lines and milk storage tanks. The combined Dairies 1 and 2 permitted quarterly average flow is 0.350 MGD with a reported reuse/irrigation flow of approximately 0.330 MGD. Inflow to the ponds is not metered. The flow is based on the number of gallons pumped from the two dairy water supply wells, less the average daily cow consumption, plus a liquid waste factor. Dairies 1 and 2 have 80,000-gallon capacity concrete sumps that receive wastewater from the barns. From each sump, wastewater is pumped to the north end of the corrals to flush the concrete feeding lanes. The flush water is collected in 100,000-gallon concrete sumps at south end of the corrals. From these sumps, the wastewater is pumped through a static screen separator prior to being discharged into a series of earthen lined evaporation/settling ponds and lagoons. Bio-stimulators, microbes, are added to the ponds to facilitate solids decomposition and to reduce odors.

Dairy 1 has two lagoons with approximately 3.5 million gallons total capacity and eight evaporation/settling ponds with 11.3 million gallons total capacity. These ponds are used on a rotating basis. Each lagoon and pond is equipped with overflow pipes to stabilize fluid levels and to maintain a minimum of two feet of freeboard. Effluent from the largest pond, Pond 7, is used for sprinkler irrigation on approximately 440 acres of cropland.

Dairy 2 has three lagoons with approximately 3.0 million gallons total capacity that are used in series. Effluent from the final pond is used to flood irrigate approximately 50 acres in the winter and 25 acres in the summer. Flood irrigation fields have at least two-foot berms to contain the irrigation water. Effluent from Dairy 2 can be routed to the ponds at Dairy 1, as needed. Effluent from both facilities can be routed to a 20.0 million gallon catchment basin, if necessary. Dairies 1 and 2 have the capacity to contain the normal facility operating volume and the 25-year, 24-hour storm event.

The separated solids, manure removed from the corrals, and solids removed during pond cleaning are applied to the agricultural fields or composted in accordance with the comprehensive nutrient management plan. The annual nitrogen application rate from all sources is limited to the annual crop nitrogen uptake rate.

There are two (2) dairy water supply wells and three (3) irrigation wells. The dairy wells are used to supply all of the water that becomes effluent.

Dairy 3 is being designed and will be operated similarly to Dairies 1 and 2, except that the ponds/lagoons will be designed and constructed to the Division's liner specifications and the concrete feeding lanes will not be flushed with water. The pond system will consist of two settling ponds and two large storage ponds. All excess Dairy 3 water will be used for sprinkler irrigation. Approximately 160 acres of irrigated cropland will be added to the facility. At least two new water supply wells, a dairy well and one or two irrigation wells, will also be constructed as part of Dairy 3.

Receiving Water Characteristics: The Permittee uses a combination of evaporation and land application to dispose the liquid manure generated by the Dairy. The Permittee is discharging to groundwaters and surface waters of the State and is requesting authorization to increase the discharge volume. The Permittee is allowed to discharge to surface waters only during storms greater than or equal to the 25-year, 24-hour storm event or after a series of chronic events that exceed the total volume of the 25-year, 24-hour storm event. Any surface water discharge would be to an unnamed dry wash tributary to the ephemeral Amargosa River.

The Permittee reports that the depth to groundwater at the Dairy ranges from 72 feet below ground surface (bgs) to 118 feet bgs. Based on limited September 2001 data from three wells, the groundwater beneath the Dairy is of good quality with a total dissolved solids concentration ranging from 316 mg/L to 328 mg/L, a chloride concentration ranging from 11 mg/L to 14 mg/L, a nitrate concentration ranging from 1.29 mg/L to 1.57 mg/L, and a total nitrogen concentration ranging from 1.79 mg/L to 2.07 mg/L.

Schedule of Compliance: The Permittee shall implement and comply with the provisions of the schedule of compliance after approval by the Administrator, including in said implementation and compliance, any additions or modifications that the Administrator may make in approving the schedule of compliance.

- a. The Permittee shall achieve compliance with the effluent limitations upon issuance of the permit.
- b. The Permittee shall submit reports illustrating compliance or noncompliance with specified compliance dates within 14 days of any respective, scheduled compliance date.
- c. Within fifteen (15) days of the effective date of this permit, the Permittee shall:
 - propose monitoring well locations and designs for each dairy pond system in operation; or
 - submit plans, specifications and an implementation schedule for the construction of liners, per WTS-37, Guidance Document for Design of Wastewater Detention Basins, for all Dairy 1 and Dairy 2 lagoons and ponds.
- d. Within sixty (60) days of the effective date of this permit, the Permittee shall install, at least, one monitoring well downgradient of each pond system that has not been approved for liner construction.
- e. Within ninety (90) days of the effective date of this permit, the Permittee shall submit a revised Effluent Management Plan that incorporates the revised monitoring requirements of this permit and other changes, as may be necessary.
- f. At least forty-five (45) days prior to the start of Dairy 3 pond construction, the Permittee shall submit a pond system design for review and approval.
- g. Within sixty (60) days of the completion of Dairy 3 construction, the Permittee shall submit a revised Operations and Maintenance Manual and Comprehensive Nutrient Management Plan that incorporate the new dairy.

Proposed Effluent Limitations: During the period beginning on the effective date of this permit and lasting until the permit expires, the Permittee is authorized to discharge to the Amargosa River via a dry wash during qualifying storm events and to groundwater of the State via dairy evaporation/settling ponds and crop irrigation/effluent reuse.

a. Effluent samples taken in compliance with the monitoring requirements specified below shall be taken:

- i. Dairy 1, final pond, currently pond 7, prior to reuse;
- ii. Dairy 2, final lagoon, currently lagoon 3, prior to reuse; and
- iii. Dairy 3, storage pond in use at time of sampling prior to reuse.

If groundwater is to be added to the ponds specified in Part I.A.1., the effluent sample location shall be moved to the pond/lagoon upgradient of the pond/lagoon used for mixing.

b. The discharge shall be limited and monitored by the Permittee as specified below:

Table 1: Effluent Limitations

PARAMETERS	EFFLUENT DISCHARGE LIMITATIONS	MONITORING REQUIREMENTS		
	30-Day Average	Sample Locations	Measurement Frequency	Sample Type
Flow, Dairies 1 & 2 (MGD)	0.350 ¹	Dairy 1 & 2 Wells	Continuous	Flow meter, Estimate
Flow, Dairy 3 (MGD)	0.275	Dairy 3 Well	Continuous	Flow meter
Total Nitrogen – N, (mg/L)	Monitor and Report	i., ii., iii.	Quarterly	Calculate
Ammonia – N (mg/L)	Monitor and Report	i., ii., iii.	Quarterly	Discrete
Nitrate – N (mg/L)	Monitor and Report	i., ii., iii.	Quarterly	Discrete
Total Kjeldahl Nitrogen (mg/L)	Monitor and Report	i., ii., iii.	Quarterly	Discrete
Biochemical Oxygen Demand, 5-day (mg/L)	Monitor and Report	i., ii., iii.	Quarterly	Discrete
pH (standard units)	Monitor and Report	i., ii., iii.	Quarterly	Discrete
Total Dissolved Solids (mg/L)	Monitor and Report	i., ii., iii.	Quarterly	Discrete

Notes:

(1) Report Dairy 1 and Dairy 2 flows separately on a monthly basis. The water used at Dairy 2 is measured with a flow meter. The Dairy 1 water use is estimated based on the water use at Dairy 2. The sum of these two flows shall not exceed 0.350 MGD.

mg/L: Milligrams per liter
MGD: Million gallons per day
-N: As nitrogen

Table 2: Field Loading

FIELD LOADING RATES	MONITORING REQUIREMENTS	SAMPLE TYPE	FREQUENCY
Liquid Manure, Annual Total (million gallons/acre)	Monitor and Report	Calculate	Annually, 4 th quarter
Solid Manure, Annual Total ¹ (lbs/acre)	Monitor and Report	Calculate	Annually, 4 th quarter
Commercial Fertilizer, Annual Total (lbs/acre)	Monitor and Report	Calculate	Annually, 4 th quarter

Notes:

⁽¹⁾ Solid Manure includes solid manure, separated solids, composted manure and solids removed during pond cleaning.

Table 3: Nitrogen Balance ⁽¹⁾

PARAMETERS	MONITORING REQUIREMENTS		
	Limitation	Measurement Frequency	Sample Type
Agronomic Uptake Rate for Nitrogen, each field (lbs/acre)	Report	Annually, in December	Calculate
Total Nitrogen Applied, each field (lbs/acre)	Report	Annually, in December	Calculate

Notes:

⁽¹⁾ The procedure for calculating a Nitrogen Balance shall be included in the CNMP.

- c. Discrete groundwater samples shall be collected to confirm the effective protection of groundwater under the established discharge conditions of this permit. If the Permittee constructs liners meeting the Division's minimum specifications in all ponds and lagoons, monitoring wells shall not be required by this permit.
- i. All monitoring wells shall be monitored in accordance with the following parameters:

Table 4: Monitoring Wells

PARAMETER	REQUIREMENTS	FREQUENCY	SAMPLE TYPE
Depth to Groundwater (feet)	Monitor & Report	Quarterly	Field Measurement
Groundwater Elevation (feet)	Monitor & Report	Quarterly	Calculate
pH (standard units)	Monitor & Report	Quarterly	Field Measurement
Total Dissolved Solids (mg/L)	Monitor & Report	Quarterly	Discrete
Chlorides (mg/L)	Monitor & Report	Quarterly	Discrete
Nitrate -N (mg/L)	10.0	Quarterly	Discrete
Total Nitrogen -N (mg/L)	Monitor & Report	Quarterly	Calculate

Notes:

mg/L: Milligrams per liter
-N: As nitrogen

- d. The detection of concentrations of nitrate as nitrogen (-N) in groundwater samples invoke the following limitations and response requirements:
 - i. If nitrate-N concentrations increase to 7.0 mg/L, an alternate method of disposal, approved by the Administrator, shall be selected;

- ii. If nitrate-N concentrations increase to 9.0 mg/L, construction or preparation of the approved alternate disposal or treatment site must begin; and
- iii. If nitrate-N concentrations increase to 10.0 mg/L, discharge to groundwater must cease.
- e. The discharge from the lagoons, ponds and/or irrigation field shall be quantified and monitored by the Permittee as specified below:

Table 5: Discharge to Surface Waters

PARAMETERS	EFFLUENT DISCHARGE LIMITATIONS	MONITORING REQUIREMENTS		
		<u>Sample Locations</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Discharge Volume ⁽¹⁾ (gallons)	Monitor and Report	Field Determination ⁽²⁾	Once/discharge	Estimate
Total Nitrogen – N, (mg/L)	Monitor and Report	Field Determination ⁽²⁾	Once/discharge	Calculate
Biochemical Oxygen Demand, 5- day (mg/L)	Monitor and Report	Field Determination ⁽²⁾	Once/discharge	Discrete
pH (standard units)	Monitor and Report	Field Determination ⁽²⁾	Once/discharge	Discrete
Total Dissolved Solids (mg/L)	Monitor and Report	Field Determination ⁽²⁾	Once/discharge	Discrete

Notes:

- (1) If discharge occurs from multiple sources that flow to a single drainage, the flow should be estimated and sampled at the confluence of the individual sources of discharge flow.
 - (2) A map identifying the sample location(s) and a justification for the selection of this/these location(s) must be submitted with the Discharge Monitoring Report.
- mg/L: Milligrams per liter
-N: As nitrogen

All liquid and solid manure shall be reused according to the Division approved Comprehensive Nutrient Management Plan or transferred to the owners of other property.

Rationale for Permit Requirements: Because this facility does not discharge to waters of the U.S. and has storage capacity in excess of the 25-year, 24-hour storm event, a National Pollutant Discharge System Elimination System (NPDES) Permit would not be required under normal conditions. The Dairy had an unauthorized release in 1998, resulting in the facility being designated as a confined animal feeding operation, thereby requiring an NPDES Permit.

The flow is quantified to demonstrate that the facility has maintained adequate stormwater storage capacity.

Monitoring of effluent quality is required to assess the potential of the water in the unlined ponds to degrade groundwater of the State and to ensure that the effluent is not applied in excess of the agronomic uptake rate for nitrogen.

Monitoring of groundwater quality is required to verify that the groundwater has not been degraded by the effluent in the unlined ponds. Nitrogen, total dissolved solids and chlorides have been determined to be the most likely contaminants from a facility of this type.

Procedures for Public Comment: The Notice of the Division's intent to issue a modified permit authorizing the facility to discharge to the groundwater of the State of Nevada and surface water of the U.S. subject to the conditions contained within the permit is being sent to the **Las Vegas Review-Journal** and the **Pahrump Valley Times** for publication. The notice is being mailed to interested persons on the Division's mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of thirty (30) days following the date of the public notice. The comment period can be extended at the discretion of the Administrator. The deadline for receipt of all comments pertaining to this proposed permit is 5:00 PM December 7, 2001.

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator of EPA Region IX or any interested agency, person or group of persons. The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Proposed Determination: The Division has made the determination to issue the proposed permit.

Prepared by: Bruce Holmgren
 November 2001

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